

# [FLIP-CHIP PACKAGE SUBSTRATE]

## Abstract

A flip-chip package has a first surface and a corresponding second surface. The chip is adapted to be disposed on the first surface of the substrate and electrically connected to the substrate. The chip has a centerline, which evenly divides the chip into two equal parts. The substrate has a peripheral connection-pad layout region disposed on the second surface of the substrate. The peripheral connection-pad layout region has a centerline neighboring region which the centerline of the chip traverses. The substrate also has a plurality of central connection pads disposed in the centerline neighboring region. Within the centerline neighboring region, at both sides of the centerline of the chip is respectively lined with the central connection pads in three rows. The central connection pads in each row are lined in parallel to the direction extending the centerline. The ratio of the number of the central connection pads for transmitting signals to the total number of the central connection pads is equal to or less than  $2/7$ .